ABSTRACT

A telemetry receiver for an implantable medical device (IMD) such as a cardiac pacemaker has an RF antenna coupled to a telemetry circuit that includes an out-of-band rejection filter comprising a thin film bulk acoustic resonator filter. The telemetry circuit includes an amplifier coupled to the thin film bulk acoustic resonator filter and a demodulator coupled to the amplifier. The filter, amplifier and demodulator are all fabricated on a common integrated circuit die. A multichannel telemetry receiver for an IMD has a plurality of thin film bulk acoustic resonator bandpass filters defining individual channels. Identification of a preferred data transmission channel for communication of programming data to the IMD is determined by obtaining samples of the signals being passed by each of a plurality of thin film bulk acoustic resonator bandpass filters that define individual channels and evaluating the samples to determine the noise level for each channel.